



INFORMATION SHEET ON NEUROCYSTICERCOSIS

What is Neurocysticercosis (NCC)?

Cysticercosis is an infection caused by the larvae of the parasite tapeworm (*Taenia solium*). The larvae get into tissues such as muscle and brain, and form cysts there (these are called cysticerci). When cysts are found in the brain, the condition is called neurocysticercosis.

What is tapeworm?

Tapeworm is a parasite that lives in intestines of animals and humans. It is a flat worm, resembling a tape in appearance and hence the name. And as the term “parasite” suggests if there is a tapeworm in your child’s intestine, it absorbs the nutrients present in the food your child eats.

Is it a common infection in India?

Yes it is a common infection in India and other developing countries due to poor sanitation of food and water.

How did my child get cysticercosis?

Children get cysticercosis when they swallow tapeworm eggs that are passed in the faeces of a human with a tapeworm. It spreads through food, water, or surfaces contaminated with faeces. Children swallow the eggs when they eat contaminated food or put contaminated fingers in their mouth.

What are the common foods implicated in causing cysticercosis?

Eating roadside food and raw fruits and vegetables washed with contaminated water can cause it. Eating pork does not always cause cysticercosis. Chinese food especially those with undercooked/raw vegetables like cabbage have risk of causing this disease.

Can my other children also get the same disease?

Yes, due to passage of eggs in stool, others can get infected in the family.

How long does it take to manifest symptoms once my child is infected?

Symptoms can occur months to years after infection. They usually manifest when the cysts start dying and the brain or other tissue around the cyst swell. The pressure of the swelling is what usually causes the symptoms of the infection

What are the signs and symptoms of neurocysticercosis?

Seizures and headaches are the most common symptoms. Other common symptoms include confusion, lack of attention, difficulty with balance, excess fluid around the brain (called hydrocephalus) may also occur.

It can also rarely cause blurring of vision if cysts are present in eyes.

How will the doctor confirm the diagnosis?

The doctor will recommend a CT scan (also called CAT scan) or magnetic resonance imaging (MRI) of the brain to check for cysts.

How is this disease treated?

Tapeworm infection can easily be treated with anti-parasitic drugs, anti-inflammatory and anti-epilepsy medications.

Does it need surgery for treatment?

If a child gets hydrocephalus (fluid in brain) because of cysticercosis, doctors might put in a shunt (tube like structure) to drain excess fluid. But it is uncommonly needed.

How long is the treatment?

It depends on case to case basis. All children will need anti-parasite treatment for a month. Anti-epileptic treatment depends on the findings of repeat CT scan done after 6 months.

What is my child's prognosis?

Most children on regular treatment have a good outcome.

Are there any complications of this disease?

There can be complications like cognitive problems, accumulation of fluid in the brain, seizure and loss of vision.

How can I prevent the infection in future?

By improving the hygiene and sanitation the infection can be avoided in future. It is important to develop certain habits in children like:

- Wash and cook all fruits and vegetables with safe water.
- Avoid raw or undercooked meat and fish, raw fruits and vegetables that you aren't able to peel yourself, and any food from street vendors.
- Drink only water boiled or bottled water for drinking.
- Avoid undercooked Chinese food with unwashed/ raw vegetables especially cabbage.
- Avoid roadside ice cubes.
- Washing hands after toilet and washing hands before eating food.